

# Effect of Yoga and Ayurvedic Dietary Modifications in Menstrual Irregularities among Adolescent Girls

Dr. Sandhya Rani Padhi<sup>1</sup>, Dr. Khusboo Gupta<sup>2</sup>, Dr. Rohit Pandey<sup>3</sup>, Dr. Krishna Meher<sup>4</sup>, Dr. Samiksha Shankar Kamble<sup>5</sup>

<sup>1</sup>AMO, Dept. of Stri Roga & Prasuti Tantra, Govt. Ayurvedic Dispensary, Arakhapur, Ganjam, Odisha, India

<sup>2</sup>Assistant Professor, Dept. of Roga Nidan, Sardar Patel Institute of Ayurvedic Medical sciences & research centre, Lucknow, India

<sup>3</sup>Assistant Professor, Dept. of Samhita Siddhant, Sardar Patel Institute of Ayurvedic Medical sciences & research centre, Lucknow, India

<sup>4</sup>Assistant Professor, Dept. of Prasuti Tantra & Stri Roga, Sri Sri Nrusinghnath Ayurved College & Research Institute, Odisha, India

<sup>5</sup>Assistant Professor, Dept. of Roga Nidan & Vikriti Vigyana, SGAMC Khamgaon, Sambhaji Nagar, India

**Abstract-** Menstrual irregularities are increasingly prevalent among adolescent girls due to lifestyle changes, stress, nutritional deficiencies, and hormonal imbalances. Ayurveda emphasizes Ahara (diet) and Vihara (lifestyle) as core elements in maintaining reproductive health. This review explores the impact of Yoga and Ayurvedic dietary modifications as integrative and non-pharmacological approaches to managing menstrual irregularities in adolescent girls. Evidence suggests that practices like Surya Namaskar, Bhramari Pranayama, and Shatkarma, combined with diet rich in Rasa-pradhan, Agni-deepana, and Vata-pacifying foods, regulate hormonal balance and enhance reproductive health. Clinical studies support improvements in cycle regularity, reduced dysmenorrhea, and psychological well-being. A combined Yoga-Ayurveda approach is a promising, cost-effective, and sustainable strategy to address menstrual health in adolescents.

**Keywords:** Menstrual irregularities, Ayurveda, Yoga, Adolescent girls, Diet, Lifestyle, PCOS

## INTRODUCTION

Menstrual health is a critical indicator of overall well-being and hormonal balance in adolescent girls. Menstrual irregularities, including delayed menarche, oligomenorrhea (infrequent periods), polymenorrhea (frequent periods), amenorrhea (absence of menstruation), and dysmenorrhea (painful menstruation), are increasingly observed during adolescence—a transitional phase marked by rapid physical, psychological, and hormonal changes. Studies estimate that up to 75% of

adolescent girls experience some form of menstrual irregularity, often attributed to hypothalamic-pituitary-ovarian axis immaturity, stress, dietary imbalances, and sedentary habits.

From a modern biomedical standpoint, menstrual irregularities in adolescence are often linked to endocrine disorders such as Polycystic Ovary Syndrome (PCOS), thyroid dysfunction, insulin resistance, and emotional disturbances. Lifestyle factors such as poor dietary habits, lack of exercise, obesity, irregular sleep patterns, and excessive screen time further exacerbate these conditions. Pharmacological interventions such as hormonal pills, while effective in symptom management, often carry the risk of side effects and do not address the underlying cause.

Ayurveda offers a time-tested, holistic understanding of menstrual health. According to Ayurvedic texts, the menstrual cycle (Artava Chakra) is regulated by the balanced functioning of Vata, Pitta, and Kapha doshas, and the nourishment of Rasa and Rakta dhatus. Menstrual irregularities (Artava Vyapad) are considered manifestations of Agni (digestive fire) impairment, Ama (toxins) accumulation, and Vata-Pitta imbalance. Ayurveda places strong emphasis on lifestyle (Vihara) and diet (Ahara) as foundational components for maintaining Yoni Vyapad Nivritti (reproductive health).

Yoga, a sister science of Ayurveda, has gained significant attention as a mind-body modality for

managing menstrual irregularities. It promotes hormonal homeostasis, enhances blood circulation to the pelvic region, and modulates the hypothalamic-pituitary-ovarian (HPO) axis through stress reduction and parasympathetic activation. Yogic practices such as Asana (postures), Pranayama (breath regulation), and Dhyana (meditation) have been shown to improve menstrual regularity, reduce menstrual pain, and enhance emotional well-being in adolescent girls.

When Yoga is combined with Ayurvedic dietary modifications—such as inclusion of Vata-pacifying, Agni-balancing, and Rasayana-rich foods—it creates a synergistic approach that addresses both physical and psychological dimensions of health. Recent clinical and observational studies support the efficacy of this integrative approach in restoring cycle regularity, enhancing reproductive function, and preventing long-term complications such as PCOS.

Given the increasing prevalence of menstrual disorders and the limitations of conventional treatments, there is a pressing need to explore and validate holistic, natural approaches such as Yoga and Ayurvedic nutrition. This review aims to provide a comprehensive overview of the existing evidence on the effectiveness of these interventions

#### Ayurvedic Perspective on Menstrual Irregularities

Sanskrit Term	Explanation
<i>Artava Vyapad</i>	Disorders of menstrual flow
<i>Rasa Dhatu Dushti</i>	Impaired nutrition affecting reproductive tissues
<i>Vata Prakopa</i>	Primary doshic involvement affecting cycle regularity
<i>Agni Dushti</i>	Leads to <i>Ama</i> formation and hormonal imbalance

#### Dosha-Dusya-Srotas Involvement

Dosha	Dusya (Affected Tissues)	Srotas (Channels)	Samprapti (Pathogenesis)	Nidana (Causes)
Vata	Rasa, Rakta, Artava	Artavavaha, Rasavaha Srotas	Vata aggravation → Artava Kshaya → Irregular menstruation	Junk food, excessive exercise, stress
Pitta	Rakta, Artava	Raktavaha Srotas	Pitta vitiation → Rakta Dushti → Excessive bleeding	Spicy foods, heat exposure, anger
Kapha	Rasa, Meda, Artava	Medovaha, Artavavaha Srotas	Kapha & Meda accumulation → Artava blockage → Oligomenorrhea	Sedentary lifestyle, sweet/heavy diet

#### Yoga for Menstrual Health

Yoga helps in endocrine modulation, stress reduction, and improved pelvic blood flow. Specific asanas and techniques include:

#### Recommended Yogic Practices

Practice	Benefits
Surya Namaskar	Hormonal regulation, improves metabolism
Baddha Konasana	Pelvic stimulation, eases menstrual cramps

in adolescent menstrual health, highlighting their physiological mechanisms, clinical outcomes, and practical applications.

#### AIMS AND OBJECTIVES

- To evaluate the role of Yoga in managing menstrual irregularities in adolescent girls.
- To analyze Ayurvedic dietary principles beneficial for menstrual health.
- To explore integrated approaches combining Yoga and Ayurvedic nutrition for improving adolescent reproductive health.

#### MATERIALS AND METHODS

This is a narrative review based on classical Ayurvedic texts, modern research databases (PubMed, AYUSH Portal, Scopus), and previous clinical studies. Keywords such as "Ayurveda," "Yoga," "Menstrual irregularity," "Adolescents," and "Dietary modifications" were used.

#### Selection Criteria:

- Published between 2000 and 2024.
- Involving adolescent females (10–19 years).
- Clinical or observational studies, classical Ayurvedic references, and integrative health articles.

Bhujangasana	Enhances ovarian function
Bhramari Pranayama	Reduces stress, balances pituitary-hypothalamic axis
Nadi Shodhana	Vata-Pitta balancing, calms mind
Shavasana	Improves sleep and relaxation

#### Ayurvedic Dietary Modifications

Ayurveda emphasizes Satmya, Desha, Kala, and Agni in dietary planning. Menstrual irregularities demand Vata-pacifying, Rasayana-rich, Agnideepana, and Medohara diet principles.

#### Dietary Guidelines

Food Group	Ayurvedic Action	Examples
Whole grains	Balances Kapha & nourishes Rasa	Millet, brown rice, wheat
Seasonal vegetables	Improves digestion, detoxifies	Lauki, spinach, beetroot
Fruits	Provides micronutrients, enhances <i>Ojas</i>	Pomegranate, apple, papaya
Herbs & spices	Agni deepana, Srotoshodhana	Turmeric, cumin, fennel, ginger
Avoid	Guru, Snigdha, Katu-Tikshna Aahara	Fried, processed, spicy, aerated drinks

#### Rasayana Foods Helpful in Adolescents

In Ayurveda, Rasayana refers to rejuvenative therapies that promote longevity, enhance tissue nourishment (Dhatu Pushti), boost immunity (Vyadhikshamatva), and support mental well-being (Medhya). During adolescence—a phase characterized by rapid physical and hormonal development—Rasayana foods and herbs play a

crucial role in maintaining balance across all bodily systems, including the reproductive system.

Ayurveda identifies adolescence as a Pitta-pradhana stage of life. This is also the age where Artava (menstruation) begins and the Shukra Dhatu (reproductive tissue) starts maturing. Nutritional support in the form of Rasayana can ensure optimal tissue development, stable hormonal activity, and healthy reproductive function.

#### Rasayana Foods for Menstrual Health in Adolescents

Food/Herb	Main Actions	Benefits in Menstrual Irregularities
Shatavari	Hormonal regulation, uterine tonic	Regulates menstruation, supports ovulation
Ashwagandha	Anti-stress, endocrine support	Balances HPO axis, reduces amenorrhea
Amla	Blood builder, antioxidant	Reduces heavy bleeding, enhances immunity
Guduchi	Detoxifier, Agni enhancer	Removes <i>Ama</i> , supports liver & hormonal health
Sesame Seeds	Uterine stimulant, Vata-pacifier	Improves flow, relieves Vata-related dysmenorrhea
Ghee	Tissue nourisher, Ojas enhancer	Strengthens reproductive tissues, reduces uterine dryness
Dates/Figs	Hematinic, energy-boosting	Alleviates anemia-related irregularities
Turmeric	Anti-inflammatory, blood purifier	Regulates flow, detoxifies reproductive system
Milk	Nourishing medium for Rasayana herbs	Enhances hormonal balance and tissue nourishment
Whole grains	Metabolic stabilizers	Improves cycle rhythm, lowers insulin resistance

#### DISCUSSION

Menstrual irregularities in adolescence represent a complex interplay of endocrine, metabolic, psychological, and lifestyle factors. Conventional management often involves pharmacological interventions like hormonal therapy, which may offer symptomatic relief but can carry long-term side effects, such as weight gain, mood swings, or impaired fertility. In contrast, holistic systems like Ayurveda and Yoga provide sustainable and side-effect-free strategies aimed at restoring physiological and mental balance by targeting the

root causes of Artava Dushti (menstrual disturbances).

#### Ayurvedic Understanding and Application

From an Ayurvedic viewpoint, Artava Vyapad arises primarily due to disturbances in Vata dosha, especially Apana Vata, which governs the downward flow and regulation of menstruation. The imbalance of Agni (digestive fire) leads to formation of Ama (toxins), which obstructs Artavavaha Srotas (channels responsible for menstrual flow), causing irregularity, pain, or absence of menses. Additionally, the depletion of Rasa and Rakta

Dhatus—the tissues responsible for nourishing menstruation—can also contribute to hypo- or amenorrhea.

Ayurvedic dietary recommendations focus on restoring Agni, cleansing Ama, and pacifying aggravated Vata. Foods that are light, warm, digestible, and rich in micronutrients (e.g., iron, calcium, folate) help rejuvenate Rasa Dhatu and maintain Artava quality. Use of Rasayana dravyas like Shatavari, Ashwagandha, and Guduchi further supports hormonal equilibrium, immune function, and stress adaptation.

The review of several clinical trials and observational studies indicates that Ayurvedic dietary practices result in:

- Reduction in cycle irregularity
- Improved ovulation patterns in PCOS
- Decreased intensity of dysmenorrhea
- Enhanced digestive and metabolic health

This aligns with the Ayurvedic principle that a properly functioning Agni supports the balance of all Doshas and ensures regularity in bodily rhythms, including the menstrual cycle.

#### Role of Yoga in Menstrual Regulation

Yoga, with its focus on asanas (postures), pranayama (breath control), and meditation, acts as a powerful non-pharmacological intervention for adolescent girls experiencing menstrual disorders. Studies have shown that regular Yoga practice reduces serum cortisol levels, enhances parasympathetic tone, and improves insulin sensitivity—all of which play pivotal roles in conditions like PCOS and stress-induced amenorrhea.

Key yogic practices such as Baddha Konasana, Bhujangasana, Paschimottanasana, and Shavasana help increase pelvic blood flow, massage reproductive organs, and improve hormonal communication between the hypothalamus, pituitary, and ovaries. Pranayama techniques like Nadi Shodhana and Bhramari further support mental calmness, reduce anxiety, and help regulate the sleep-wake cycle, which indirectly impacts hormonal rhythms.

Several studies have demonstrated that adolescent girls who practiced Yoga regularly for 8–12 weeks experienced:

- Shortening of abnormally long menstrual cycles
- Reduced pain and premenstrual symptoms
- Improved mood, self-esteem, and academic performance
- Regularization of menstruation without medications

#### Combined Benefits of Yoga and Ayurvedic Diet

An integrated Yoga-Ayurveda approach produces synergistic effects:

**Metabolic balance:** Ayurveda's emphasis on digestion and Yoga's influence on endocrine function together regulate insulin, thyroid, and reproductive hormones.

**Neuropsychological stability:** Yogic practices reduce sympathetic overdrive, while Rasayana-rich Ayurvedic diets nourish Manovaha Srotas (mind-body channels), reducing anxiety and emotional lability.

**Srotoshodhana (channel cleansing):** Both practices aid in detoxification, eliminating Ama and enhancing tissue regeneration and menstrual flow.

Additionally, this combined approach empowers adolescent girls with practical tools for self-care, creating a sense of agency and health responsibility. Incorporating such practices into school health programs, adolescent wellness clinics, and community initiatives could offer cost-effective, scalable solutions to the rising burden of menstrual health issues.

#### LIMITATIONS AND FUTURE DIRECTIONS

- While available literature supports the use of Yoga and Ayurveda in menstrual irregularities, several gaps remain:
- Many studies have small sample sizes and lack standardized protocols.
- More randomized controlled trials (RCTs) with long-term follow-up are needed.
- There is a lack of awareness and accessibility of such holistic interventions in rural and underserved populations.

#### CONCLUSION

Menstrual irregularities during adolescence are increasingly prevalent and often reflect deeper imbalances in lifestyle, nutrition, hormonal rhythms, and emotional well-being. These disruptions not

only interfere with a girl's day-to-day life but may also pose long-term risks to reproductive health, including infertility, metabolic syndrome, and polycystic ovarian syndrome (PCOS). While modern medicine offers symptomatic relief through hormonal therapies and medications, these interventions do not always address the root causes and may carry adverse effects, especially when used over the long term. This review highlights the promising potential of an integrative approach that combines Yoga practices and Ayurvedic dietary modifications in the management of adolescent menstrual irregularities. Both modalities are grounded in holistic philosophies that consider the body, mind, and environment as interconnected systems. Their synergy offers a sustainable, side-effect-free, and empowering path to menstrual health—especially relevant during the sensitive and formative phase of adolescence. The reviewed evidence from classical Ayurvedic texts and recent clinical studies demonstrates that this combined approach not only alleviates menstrual symptoms such as irregular cycles, dysmenorrhea, and PMS but also improves psychological resilience, digestive strength, and immune function. It empowers adolescent girls with the knowledge and tools to take charge of their reproductive health naturally and confidently.

#### REFERENCE

- [1] Charaka Samhita, Chikitsa Sthana, Chapter 30. In: Acharya YT, editor. Charaka Samhita of Agnivesha, 5th ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2001. p. 640–5.
- [2] Sushruta Samhita, Sharira Sthana, Chapter 2. In: Acharya YT, editor. Sushruta Samhita with Nibandhasangraha Commentary, 8th ed. Varanasi: Chaukhambha Orientalia; 2005. p. 32–6.
- [3] Ashtanga Hridaya, Sutra Sthana, Chapter 11. In: Paradkar HS, editor. Ashtanga Hridayam of Vagbhata, Varanasi: Krishnadas Academy; 2000. p. 190–5.
- [4] Sharma H, Chandola HM, Singh G, Basisht G. Utilization of Ayurveda in health care: An approach for prevention, health promotion, and treatment of disease. Part 2 – Ayurveda in primary health care. *J Altern Complement Med*. 2007;13(10):1135–50.
- [5] Patil NJ, Nagarathna R, Tekur P, Manohar PV, Bhargav H, Raghuram N. A randomized trial of the effect of yoga on hormonal imbalance in adolescent girls with menstrual irregularities. *Int J Yoga*. 2013;6(2):85–91.
- [6] Mahajan A, Ramesh R, Bhide AA. Effect of yoga and lifestyle intervention on menstrual disorders among adolescents: A clinical study. *J Ayurveda Integr Med*. 2019;10(4):241–5.
- [7] Nagarathna R, Rajesh SK, Amit S, Gunasheela S, Sudheer D, Nagendra HR. Effect of integrated yoga therapy on PCOS: A randomized control trial. *Int J Yoga*. 2020;13(2):118–23.
- [8] Balasubramanian A, Mishra G, Thakur JS. Adolescent menstrual health: An Indian perspective. *Indian J Public Health*. 2015;59(4):331–6.
- [9] Pandey R, Bajpai R. Effect of yoga on primary dysmenorrhea and menstrual distress in adolescent girls. *J Complement Integr Med*. 2017;14(2):1–8.
- [10] Thakar AB. Clinical evaluation of Ashokarishta and Shatavari in artavakshaya (oligomenorrhea). *AYU*. 2007;28(1):123–7.
- [11] Acharya R, Sharma P, Chandola HM, Singh G. Clinical evaluation of Phalatrikadi Kwatha and Ashwagandha in PCOS. *AYU*. 2011;32(2):180–4.
- [12] Satpathy S, Nayak C, Singh S, Swain T, Shankar K. Efficacy of Ayurvedic dietary regimen in the management of artavakshaya. *AYU*. 2018;39(1):54–60.
- [13] Arya A, Bansal R, Kaur J. Role of Shatavari (*Asparagus racemosus*) as a female reproductive tonic: A review. *J Ayurveda Holist Med Sci*. 2021;9(2):47–52.
- [14] Khalsa SB. Yoga as a therapeutic intervention: A bibliometric analysis of published research studies. *Indian J Physiol Pharmacol*. 2004;48(3):269–85.
- [15] Subramanian RK, Kannan M, Kizhakkeveetil A. The effect of dietary modification and yoga therapy in adolescent girls with PCOS. *Int J Health Sci Res*. 2019;9(7):105–12.
- [16] Rathi M, Yadav RK. Management of menstrual irregularity through Rasayana and dietetics: A review. *J Ayurveda Integr Med Sci*. 2020;8(1):42–8.
- [17] Government of India. The Ayurvedic Pharmacopoeia of India, Part I, Vol I–V. New Delhi: Ministry of AYUSH; 2001–2010.